PART XXIII.—FOREST FIRES.

1. The forests where the fires occur should be entirely closed to cattle grazing as well as to cultivation, which, as an ordinary rule, is out of place in forests, and only causes damage to them. G. R. No. 4318, dated 29th July 1873.)

2. Most of the measures proposed by the Conservator of Forests, N. D., for the prevention of forest fires in his letter No. 2212, dated 30th May 1881, given below are such as would be carried out by the Forest Department; but the gist of the suggestions contained in paragraph 3 of it should be communicated by Collectors to their subordinates. It is only in respect of the second, fourth and sixth measures of fire conservancy recommended by the Conservator that the action and aid of Revenue Officers are required. The importance of preserving forests and the effect which the denudation of the jungle has on the rainfall and climate should be inculcated in all Government schools :—

"2. Forest fires are caused by—

(*a*) Travellers throwing away the still burning end of their cigars into the dry and inflammable grass standing on the sides of roads and pathways, which lead through forests.

(*b*) Travellers cooking food inside a forest reserve and proceeding on their journey after their meal without extinguishing properly the fire ignited by them.

(*c*) The careless burning of ráb on the borders of forests. The rayat sets fire to the ráb on his field adjoining a forest, then goes home without first seeing that the fire has consumed itself.

(*d*) Evil-disposed people to spite a grass contractor setting fire to forests in view to the destruction of the contractor's grass.

(*e*) Sparks from engines of passing trains igniting grass.

(*f*) Wild tribes setting fire to the grass round 'earths' in order to smoke out rats and other vermin, and allowing the fire to extend and burn regardless of consequences.

(*g*) Mhowra gatherers setting fire to the grass under Mohwra trees so as to obtain a clear floor underneath the tree for the berries to fall upon. The spread or burning out of these fires is mostly left to chance.

(*h*) The deliberate burning of tall grass in big forests by jungle people and travellers in order to destroy cover for big game such as tigers, panthers, bears, and pigs.

(*j*) Invasion of fire from foreign territory where as a rule fire conservancy is unknown.

(*k*) The deliberate firing of pasturage forests by Dhangars, Gowlies and professional graziers under the belief that by the action of fire an earlier or more vigorous growth of grass is secured.

"3 * * * *

The measures of fire conservancy I would recommend for adoption are as under :—

First.—I would have a system of fire traces in all districts, a complete scheme should be prepared for each reserve and should be illustrated upon the map of the reserve.

a. The grass one chain or 33 feet on both sides of a cart road, or of a public highway where it passes through a forest reserve, should be burned in the cold weather.

b. The grass to the distance of 1½ chains or of 50 feet where the border of a forest reserve is conterminous with foreign forests or with private forest or grass lands should be burned in the cold weather.

c. The grass to the distance of 3 chains or 100 feet on both sides of the Railway line should be burned in the cold weather.

Where possible these fire traces should be burned by the Forest Establishments without any cost to Government, but in some heavy and out of the way forest it may be necessary to burn fire traces by hired labour, to be charged in the forest accounts against the prescribed sub-head A VIII.*e.*—Protection from fire.

If the grass is saleable it should be sold to be cut and removed and the stalks remaining should be burnt down.

Second.—Villagers should be made fully aware by the Revenue Officers of the necessity of preventing and extinguishing fires in forests.

a. Translations of Section 78, Chapter XIV, of the Indian Forest Act VII of 1878 should be posted up in a conspicuous place in every village contiguous to a forest,—after it has been read and been explained to the assembled villagers by the head-men of the village.

b. Villagers should be warned that when burning ráb upon a field adjoining a forest reserve, every precaution against the spread of fire should be taken, some one should remain by the fire until it has consumed itself, and a cleared space of one chain or 33 feet should exist between the forest boundary and the ráb.

c. Villagers should be cautioned regarding smoking in a forest reserve, about kindling fires for cooking and about keeping and carrying fire. Cautions and warnings to villagers should be made by proclamation from the Collector through the Revenue Officers, and they should be read and explained to assembled villagers by the village head-men before they are posted up in the village.

Third.—Repression.

a. Detected offences of firing forests should be adequately punished by the magistracy. It is extremely difficult to bring satisfactory proof of a charge of forest burning, but when proof is fully established, punishment should follow and should be prompt and deterrent.

b. The personal responsibility of the Forest Protective Establishments should in the case of forest fires be enforced. The Beat Guard should be fined for every fire, the origin of which cannot be satisfactorily accounted for.

Fourth.—'Conciliation.' I cannot advocate the policy of bribing villagers to refrain from firing forests by giving them privileges of cutting so-called inferior kinds of wood. It would be a very false and dangerous proceeding to do so, and I think no good cause has been shown for such a course. But I would suggest—

a. That villagers, other than those specified in Section 78 of the Forest Act, who may assist at putting out a forest fire should be paid fair wages for the work they have performed.

b. Where fire conservancy has been perfect and special circumstances suggest some recognition thereof, a necessary grant to purchase wood for the village temple or dharmshála or a grant to build a well or other similar project for the benefit of the village community might be made from Forest Funds at the instance of the District Forest Officer.

c. The pátel, other village officer or any person of those specified in Section 78 of the Forest Act, who

may perform some conspicuously good service in the interests of fire conservancy should be specially rewarded upon the approved recommendation of the District Forest Officer.

Fifth.—Special establishments for fire conservancy should be maintained and charged under the prescribed Budget head A VIII. *e.*—Fire protection, in big forests removed from densely populated tracts, such, for instance, the Dángs, the Mándvi Reserves of Surat, the Sátpuda, the Sátmála, the Trans Purna, &c., Reserves of Khándesh, and possibily for the East-Wada, the Alman, Tak-Mak, Gotara, &c., Reserves of the Thána District. These establishments should consist of either patrols upon daily and monthly wages, or forest settlers who should be given land to cultivate, rent free, upon the outskirts of the forests in payment of such forest service.

Sixth.—I strongly recommend the adoption of a suggestion made by Mr. Wallinger, Deputy Conservator of Forests, Poona, that the action of Government, with reference to forest reservation, should be clearly explained to the people who are by no means slow to comprehend when it is shown to them the benefits to be derived to Government, to themselves, and to the country by a strong forest policy. Mr. Wallinger remarks :—

> Much might be done in this way by translating and circulating in the dialect of the district some of the more important public documents having reference to the subject of forests.
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> For instance, the views of the Famine Commission on 'Forests' might be translated and circulated and explained to the people and in the schools. Again, the published views of competent agriculturists as regards the use and value of trees and forests might be widely made known. As a useful case in point, Mr. Robertson, the Superintendent of the Government Farm in Madras, has lately written as follows : – 'Trees attract rain from the clouds, their shade prevents the sun from drying up the ground too soon, their roots retain moisture and prevent its oozing away to the streams too soon. Where trees abound much rain falls, and what falls is retained in the ground and fertilizing matter also is brought to the fields where there are trees, jungle and forests in the country, so that though trees cause a little loss to the rayat in the ground where they stand they cause him more gain in other ways. Therefore rayats ought to plant topes and even single trees so that on the whole there may be trees on every acre of cultivated land, and the trees ought to be such that their leaves may be used as manure for the paddy or rice fields. Besides this, rayats ought not to recklessly destroy trees in the forests; but for every good tree they are allowed to cut down, they should plant four or five. If they do this, their children will have timber for houses and fuel, the rainfall will not be diminished, nor the soil impoverished; as people will probably become more numerous year by year, the present generation ought not act to spoil beforehand the comfort of their progeny.' The translation and circulation of such a document addressed to rayats of Madras would neither be expensive nor troublesome and would greatly tend, I think, to influence the minds of the people and thus to put a stop to the operations of those who would wilfully endeavour to injure forests by fire or otherwise.

Seventh.—'Evergreen fencing.'

That forest reserves be gradually fenced in by living hedges of evergreen growth. Bambus should take a large part in this work. Gaps should be left where roads and highways lead into the reserve. Fences of this de-

scription will prove remunerative in a fiscal point of view. They will not only define the boundaries of the forests, but they will offer a barrier to the ingress of fire. Of course when the bambus seed and before they dry and become inflammable, they must be cut out and a second growth raised from the old roots."

(G. Rs. Nos. 3577, dated 22nd June 1881, and 4232, dated 21st July 1881, and G. R., E. D., No. 998, dated 4th idem.)

3. The origin of the forest fires is due to two main causes. They are either lighted by native shikáris with the view of more easily approaching their game, or by graziers who wish to produce a new succulent crop of young grass for their cattle. The temptation to interested people to fire the jungle for the sake of improving the grass crop is very great, and it is no doubt a matter of the utmost difficulty to bring incendiarism of this kind home to the actual offender so as to ensure a legal punishment. The only possibility, therefore, of dealing with this question would seem to be to withdraw the temptation by prohibiting the people as much as possible from reaping the benefits of their acts and to close against grazing any area that may have been wilfully lighted for the purpose of improving the grass crop. (G. I., H. D., No. 209-F., dated 5th March 1885; *vide* G. R. No. 2579, dated 26th idem.)

4. The general adoption of the rule stopping free grazing in Government forests for one year when more than one-third of the forest is burned, and for two years when more than half is burned, is sanctioned subject to the condition that each case should be considered on its own merits and decided by the Collector after careful inquiry, and that the penalty should not be enforced unless the Collector has satisfied himself that there has been co-operation, connivance or gross negligence or indifference on the part of the village population as a whole.

The imposition of a hard and fast rule prohibiting free grazing absolutely for a fixed period in every instance in which a forest fire of certain dimensions occurred, might doubtless operate harshly in some cases. Unquestionably in some instances fires originate from accidental causes over which the inhabitants of the forest villages can exercise no control or are caused by the careless acts of casual wayfarers, and persons of wandering tribes, having no connection with the forest villages. In such cases to punish the inhabitants of the latter for results in no degree caused by themselves, would not be an equitable procedure. But when the fires are the consequence of deliberate incendiarism or culpable carelessness on the part of the dwellers in a forest village, it is just and proper that they should be made to suffer for their misconduct or negligence. It will be for the Collector to make inquiry into each case, and to see that when the rule has to be enforced, only the real offenders should bear the loss, the village responsibility being duly regarded.

The Panch Mahâls should for the present be exempted from the operation of the rule.

When feasible, rewards may be given to persons giving information leading to the detection of the causes of forest fires, and to villagers turning out *en masse* to extinguish a fire. (G. R. No. 1942, dated 24th March 1888.)

5. It is not intended by Government Resolution No. 1942, dated 24th March 1888, to withdraw all discretion from a Collector, but merely to cause it to be understood that when possible, a careful enquiry should be instituted. In instances where destructive fires occur through a vast area of forest, and are not accidental in their origin, it rests with the Collector and Commissioner to exercise their discretion in determining what amount of evidence suffices to establish the connivance or complicity of the villagers in the burnt forest tracts and what penalty should be exacted. (G. R. No. 5590, dated 2nd August 1889.)

6. Wherever fire-paths are required in the interests of forest conservancy they must be provided by the Forest Department and not at the expense of the occupants of the lands bordering on forests or within forest limits. The Forest Department must rely mainly on the exertions of its own establishments for guarding the forests against damage. The establishment of the "coupe" system, under which felling is restricted in each season to specified blocks of forest and entirely prohibited elsewhere, must make conservancy more easy than it was when felling was allowed indiscriminately in all parts of the forests. (G. R. No. 7108, dated 6th September 1892.)

7. The following circular No. 5848, dated 29th July 1892, issued by the District Magistrate, Khándesh, for the information and guidance of the Magistrates subordinate to him regarding forest fires was circulated by Government to all District Magistrates for information :—

"The following extract from Government of India's Resolution No. 139, dated 5th February 1892, on the subject of forest fires is forwarded to all Magistrates for information and guidance.

"2. The setting fire to a reserved forest is a very serious offence and, as such, merits severe notice. It is not the actual damage caused at the time that is to be considered, but the injury caused to Government and the people in general by the destruction of the young forest growth and the consequent delay in afforesting the treeless reserves.

"3. The District Magistrate has reason to believe that some Magistrates consider the offence a venial one owing to the absence of any 'intention' on the part of the offender. It is not necessary, however, under the Forest Act that intention should be proved. Carelessness in the use of fire by which a reserve is burnt is equally an offence—but in the meting out of punishment a distinction can be made if the Magistrate sees fit.

"4. The District Magistrate trusts then that all Magistrates will be very careful in dealing with any such forest cases which are brought before them. Forest fires are unhappily but too frequent in this district, and in most

cases it is very difficult to discover their origin, but when an accused has been convicted, the above stated considerations should not be lost sight of, and when the circumstances establish either deliberate intention or very gross carelessness and disregard of ordinary precautions it is obvious that the punishment awarded should be adequate.

Extract paragraph 7 of letter No. 139 of 5th February 1892 from the Government of India to the Chief Commissioner of Assam reviewing the Progress Report on Forest Administration of Assam for 1890-91.

"It is noticeable that out of 17 new cases on account of injury caused to the forests by fire, 13 were compounded. In the opinion of His Excellency in Council, the provisions of Section 67 of the Act should only be applied to such cases cautiously and for very special reasons; any action which might tend to foster in the minds of an ignorant population the idea that firing of the forests, whether of set purpose or through culpable negligence is not a serious offence, or one which in the opinion of Government calls for vigorous suppression, is manifestly to be deprecated. Section 67 was enacted to meet the case of petty offences, like the illicit removal of forest produce; but such cases as those referred to in paragraphs 50 and 51 of the report, in which considerable damage is understood to have been caused by fire to two reserved forests, certainly do not fall within this category."

(G. R. No. 4548, dated 24th June 1893.)